

## A New *Carex* (Cyperaceae) of the Section *Stellulatae*. Hawaiian Plant Studies 113<sup>1</sup>

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THE GENUS *Carex* in Hawaii has been well-studied, and its taxonomy was presented by Krauss (1950). He accepted 12 taxa, 1 American variety that was also indigenous in Hawaii, and 11 endemics. During the succeeding 30 years, there have been no additions to this total population. Now, a single additional species has been discovered by R. Gustafson in the rain forest of the eastern slope of the island of Hawaii. It is the first local member of the section *Stellulatae*, and it is judged to be a new species. Evidently it is of North American ancestry.

*Carex hawaiiensis* sp. nov. (sect. *Stellulatae*)

Figure 1.

DIAGNOSIS HOLOTYPE: Planta caespitosa est, vaginis basalibus 4–12 mm longis lanceolatis cum nervis valdibus compluribus, foliis compluribus et basalibus vaginis 5–8 cm longis marginibus membranaceis apice truncato, laminis 3–35 cm longis strigente involutis et 0.3 mm latis clare viridibus scabris apice acuto, culmis compluribus 21–39 cm longis 0.5 mm diametro scabris, spicis 12–25 mm longis capitibus 2–6 separatis eis inferis medialibusque femineis illa supera androgynea vel mascula, capitibus femineis 4–5 mm diametro subglobosis 5–6-floriferis, squama basali 2 mm longa lanceolata, squamis 2–2.5 mm longis late ellipticis acutis membranaceis pallide badiis midnervo uninervoso viridi ad apicem acutum extenso, perigyniis 3–3.2 mm longis 0.8–1.1 mm latis viridibus lanceolatis rostro 0.5–0.8 mm longo minime serrulato breve bidentato latere proximali 9-nervoso

concavo marginibus crebre costatis latere distali 13-nervoso parte basali intra spongiosa, corpore achaeinii 1.8 mm longo 1 mm lato late lanceolato albo in latere proximali paulum concavo latere distali humiliter convexo indistincte 7-nervoso in basi cum costo elevato apice rostrato badio 0.5 mm longo, capitibus terminalibus 5–6 mm longo androgyno vel masculino, squamis 3 mm longis stramineis ellipticis acutis.

DIAGNOSIS OF HOLOTYPE: Plant tufted; basal sheaths 4–12 mm long, lanceolate, with several strong nerves; leaves several, all basal, their sheaths 5–8 cm long, the margins membranous, the apex truncate; blades 3–35 cm long, tightly involute and 0.3 mm wide, bright green, scabrous, the apex acute; culms several, 21–39 cm long, 0.5 mm in diameter, scabrous; lowest bract 8–18 mm long, setaceous; spikes 12–25 mm long, with 2–6 heads, these separated, the lower and middle ones all pistillate, the upper one androgynous or wholly staminate; pistillate heads 4–5 mm in diameter, subglobose, 5–6-flowered; basal scale 2 mm long, lanceolate; scales 2–2.5 mm long, broadly elliptic, acute, membranous, pale brownish, the green 1-nerved midrib extending to the acute tip; perigynia 3–3.2 mm long, 0.8–1.1 mm wide, green, lanceolate, with a 0.5–0.8 mm shortly bidentate beak which is slightly serrulate, the proximal side concave, the margins with strong ribs, the proximal side 9-nerved, the distal side 13-nerved, the basal portion spongy within; achene body 1.8 mm long, 1 mm wide, broadly lanceolate, white, slightly concave on the proximal side, low convex on the distal side, just at base with an elevated rib, faintly 7-nerved, at apex bearing a brown 0.5 mm beak; terminal head 5–6 mm long, androgynous or staminate; scales 3 mm long, stramineous, elliptic, acute, with a strong green midrib.

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**HOLOTYPE:** Hawaiian Islands, Island of Hawaii, South Hilo Dist., Waiakea Forest Reserve, Power Line Road, Pole 27, Transect 26, about 2 mi S of junction with the Saddle Road, kipuka about 1 mi E of the road, common on damp forest floor, with *Broussaisia*, *Pelea*, *Metrosideros*, *Cibotium*, *Rubus*, *Astelia*, *Coprosma*, *Vaccinium*, 5300 ft elevation, 21 July 1981, Robert Gustafson 2388 (BISH). Isotype (LAM).

#### DISCUSSION

*Carex hawaiiensis* is the first Hawaiian member of the section *Stellulatae*. The species most similar to it is *C. Howeii* Mack., which occurs from Nova Scotia to Michigan to Louisiana. *C. Howeii* Mack. is a species with the perigynia 2.2–2.8 mm long, the beaks 1/3 as long as the perigynia; scales 1.1–1.4 mm long, broadly ovate, obtusish or acutish, whitish or greenish, hyaline with a 3-nerved midrib that mostly does not reach to the apex; leaves and culms to 75 cm long, blades 0.5–1 mm wide. *C. hawaiiensis* has the perigynia 3–3.2 mm long, the beak 1/5 to 1/6 as long as the perigynium; scales 2–2.5 mm long, broadly elliptic, acute, membranous, pale brownish, the green, 1-nerved midrib extending to the tip; culms 21–39 cm long; and the blades 3–35 cm long, 0.3 mm wide, and tightly involute.

The new epithet is formed from the name of the type locality, Hawaii, and *-ensis*, the Latin adjectival geographic suffix.

#### LITERATURE CITED

KRAUSS, ROBERT W. 1950. A taxonomic revision of the Hawaiian species of the genus *Carex*. Pac. Sci. 4: 249–282, Figs. 1–21.

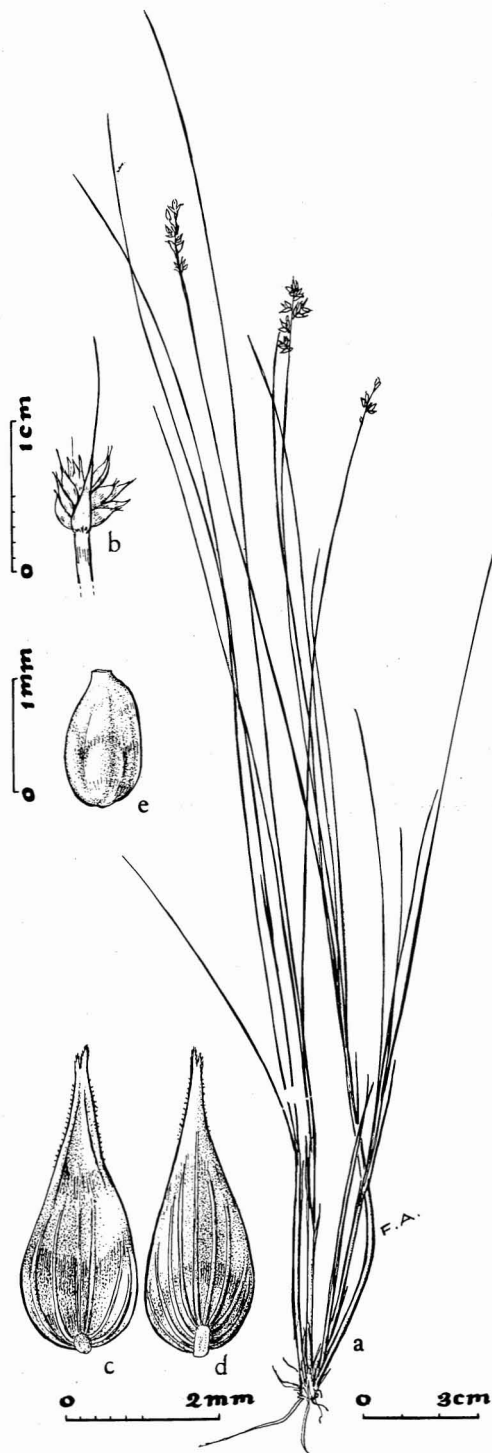


FIGURE 1. *Carex hawaiiensis* St. John, from holotype. a, habit,  $\times \frac{1}{2}$ ; b, spike,  $\times 2$ ; c, d, perigynium,  $\times 10$ ; e, achene,  $\times 5$ .